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AVNET EMBEDDED SPECIFICATION.

Datasheet

MultiTech

MTCBA-G-F4

MultiModem® GPRS

Cellular Modems

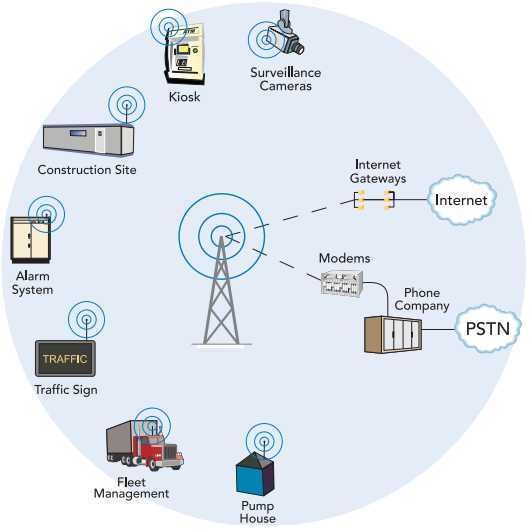
Benefits

- Rugged industrial chassis design
- Desktop or panel mounting
- Carrier approved
- RS-232, USB and Ethernet interfaces

The MultiModem® GPRS cellular modem offers standards-based quad-band GSM/GPRS Class 10 performance. This ready-to-deploy, standalone modem provides wireless data communication and integrates seamlessly with virtually any application. It is available with a broad range of interface options including RS-232, USB and Ethernet to cover all of your application needs. The MultiModem GPRS cellular modem is based on industry-standard open interfaces and can be desktop or panel mounted.

Features

- GPRS Class 10
- Quad-band 850/900/1800/1900 MHz
- Packet data up to 85.6K bps
- Embedded TCP/IP stack
- Circuit-switched data up to 14.4K bps transparent and non-transparent
- Short Message Services (SMS)
- RS-232, USB and Ethernet interfaces
- SMA antenna connector and SIM socket
- Serial interface supports DTE speeds to 115.2K bps
- AT command compatible
- MNP2 error correction, V.42bis compression
- Numerous LEDs provide operational status
- Desktop or panel mounting
- PTCRB certified
- Carrier approved
- Two-year warranty



MultiTech® Systems

Highlights

Applications. With packet data speeds up to 85.6K bps, the MultiModem GPRS cellular modem is targeted at applications which periodically need to send or receive data over a wireless network. It is ideal for:

- Automated machine-to-machine (M2M)
- Public Safety/Emergency Services
- Public Transit
- Remote Industrial, Medical, Environmental, Monitoring
- Remote diagnostics
- Security Systems
- Telemetry/Remote Metering
- Vehicle Tracking/Fleet Management/AVL

Reduces Development Time. The MultiModem GPRS cellular modem can make your existing and next generation device communication-ready without requiring any hardware changes to its design. It actually provides faster time-to-market because it relieves the burden and expense of obtaining PTCRB and RF approvals. This complete, ready-to-deploy cellular modem allows you to enhance your product while you focus on developing its core features.

Packet-switched Data. The MultiModem GPRS cellular modem supports GPRS Class 10 packet-switched data. This enables mobile Internet functionality by allowing interworking between the existing Internet and the cellular network at speeds up to 85.6K bps. Any service that is used over the fixed Internet today – File Transfer Protocol (FTP), web browsing, chat, e-mail, telnet is available over the cellular network as well. It includes support for PBCCH, coding schemes: CS1 to CS4 and is compliant with SMG31bis.

Circuit-switched Data. The MultiModem GPRS cellular modem also supports GSM circuit-switched data connections. Circuit-switched data connections support speeds up to 14.4K bps, as well as MNP 2 error correction, V.42bis compression. CSD cellular connections are ideal for applications that require a quick wireless replacement of an existing point-to-point analog dial-up connection. They integrate seamlessly with your current application requiring little infrastructure change.

Short Message Services. The MultiModem GPRS cellular modem offers SMS features such as text and PDU, point-to-point (MT/MO) and cell broadcast.

Internet-enabled. The MultiModem GPRS cellular modem includes an embedded TCP/IP protocol stack to bring Internet connectivity to any device without making changes to its hardware design. Using the Internet protocols and the wireless connection to an IP network, the modem sends and receives data over the Internet.

Voice Features. The MultiModem GPRS cellular modem provides telephony and Dual Tone Multi Frequency (DTMF) transmission functionality. It also allows for emergency calls as well as echo cancellation and noise reduction (option), and full rate, enhanced Full Rate and Half Rate (FR/EFR/HR).

Compatible Supplementary Services. The MultiModem GPRS cellular modem is compatible with supplementary services such as call forwarding, call barring, multiparty, call waiting and call hold, calling line identification, advice of charge, USSD, closed user group and explicit call transfer.

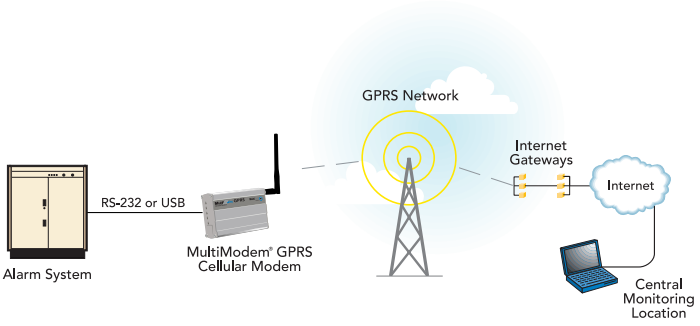
Management Features. The MultiModem GPRS cellular modem provides advanced management features including phone book management, fixed dialing number, real time clock and alarm management.

Industrial Chassis. The MultiModem GPRS cellular modem is packaged in a rugged, industrial chassis with an SMA antenna connector. It can be desktop or panel mounted and features numerous LEDs providing operational status.

Multiple Interface Options. The MultiModem GPRS cellular modem is designed around a broad range of interface options including RS-232, USB and Ethernet to provide you with seamless connectivity for your application. Each interface option offers unique features and benefits related to the technology it supports.

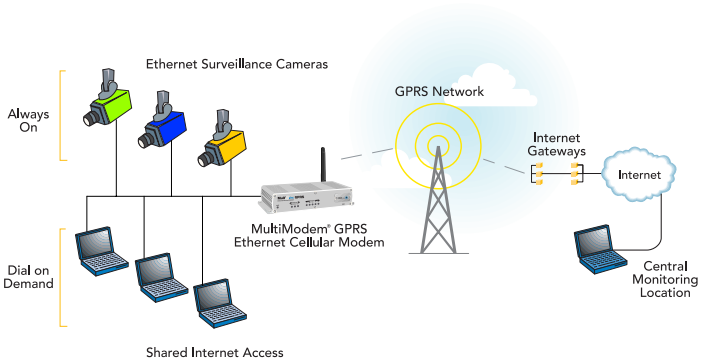
Serial Connectivity. The MultiModem GPRS cellular modem with a serial interface utilizes RS-232 or USB to connect to any serial device to provide access to the Internet. The RS-232 model supports DTE speeds of 115.2K bps and provides a DE-15 voice/data interface and permanent screw-type power connector. The USB model provides for the easiest modem installation. The USB interface features a 12M bps serial connection and utilizes an RJ-9 jack for voice connectivity. In addition, it is host-based USB powered which means no external power supply is required.

RS-232/USB Application



Ethernet Connectivity. The MultiModem GPRS cellular modem with an Ethernet interface provides shared Internet access with one IP address. The built-in routing capabilities provide DHCP services and firewall security utilizing Network Address Translation. The modem can be configured for one of three network connections: always-on, wake-up on ring, or dial-on demand. The always-on network connection automatically establishes a wireless data connection and allows for around the clock surveillance, monitoring or real-time data acquisition of any remote Ethernet device such as a Web camera. If the data link is dropped in the event of poor reception or a complete loss of service, it will automatically re-establish the data link. The wake-up on ring configuration allows the modem to "wake up" and initiate a connection when it detects an incoming ring. For security reasons, you can setup the modem to wake up based on the caller ID. This configuration is ideal for reducing the costs associated with the modem being online and available 24/7. When configured for dial-on demand, the cellular modem only accesses the Internet when data is present. This configuration is ideal for sharing Internet access among networked PCs.

Ethernet Application



Industry-standard Modem Commands. The MultiModem GPRS cellular modem provides industry-standard AT-style commands for ease of integration into your existing software application.

Network and RF Approved. The MultiModem GPRS cellular modem is PTCRB certified. In addition, it has successfully completed worldwide compliance testing for global RF approval.

Comprehensive Service and Support. The Multi-Tech commitment to service means we provide a two-year product warranty and service that includes technical support, 24-hour web site and ftp support.

Specifications

Packet Data Features
GPRS Class 10, PBCCH support
Coding Schemes: CS1 to CS4
Embedded TCP/IP stack

Circuit Switched Data/Fax Features
Asynchronous, transparent & non-transparent up to 14.4K bps, MNP2 & V.42bis

SMS Features
Text & PDU, Point-to-Point, cell broadcast

Internet Protocols Supported
DNS Resolve, FTP client, IP, IPCP, LCP, PPP (dial-out), TCP socket, UDP socket, CHAP, PAP

Antenna Connector
RF Antenna: 50 ohm SMA (Female connector)

SIM Connector
Standard 3V SIM receptacle

Interface Connectors
RS-232 Model: DE-15
USB Model: USB Type B
Ethernet Model: RJ-45, 10BaseT/100BaseTX, 802.3

Power Connectors
RS-232 & Ethernet Models: 2.5mm miniature screw
USB Model: Bus Powered

Voice Connectors
RS-232 Model: Optional Y-cable
USB & Ethernet Models: RJ-9 4-pos modjack

Power Requirements
5V to 32VDC

Physical Description
RS-232 & USB Models:
4.3" L x 2.4" W x 0.94" H; 4.2 oz.
(11 cm x 6.1 cm x 2.4 cm; 119g)
Ethernet Model:
2.8" L x 7.0" W x 1.2" H; 11.5 oz.
(7.1 cm x 17.8 cm x 3.0 cm; 326g)

Operating Environment
-30° to +70° C

Certifications:
CE Mark, R&TTE
EMC: FCC Part 2, 15, 22, 24, EN 55022, & EN 55024
Safety: cUL, UL 60950, EN 60950
Network: PTCRB

Ordering Information

Product	Description	Region
MTCBA-G*†	GSM/GPRS Class 10 Modem	Global
Ordering Codes		
-F4	850/900/1800/1900 MHz GPRS Modem	
-U	USB Interface	
-ED	900/1800 MHz Default	
-EN	Ethernet Interface	
-NAM	Includes US Style Power Cord	
-EU	Includes Euro Style Power Cord	
-GB/IE	Includes UK Style Power Cord	

* Use ordering codes for specific build options. Check with your local carrier to see which frequency bands are required. Go to www.multitech.com for detailed product model numbers.

† All build options support 850/900/1800/1900 MHz cellular connectivity. Standard builds default to 850/1900 MHz while the builds that include a -ED in the ordering code default for 900/1800 MHz.

Made in Mounds View, MN, U.S.A.

Features and specifications are subject to change without notice.

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